

Exploring STEM in Afterschool with Y4Y

Webinar

December 13, 2012
1:00 p.m. (ET)

YOUTH FOR YOUTH



21st Century Community
Learning Centers
U.S. Department of Education
400 Maryland Avenue SW
Washington, DC 20202
y4y.ed.gov

Disclaimer

This information is being provided as part of a Fiscal Year (FY) 2013 webinar for the “You For Youth” (Y4Y) professional development website. This website supports the 21st Century Community Learning Centers (21st CCLC) grant program administered by the U.S. Department of Education. Information and materials mentioned or shown during this presentation are provided as resources and examples for the viewer’s convenience. Their inclusion is not intended as an endorsement by the U.S. Department of Education.

In addition, the instructional practices and assessments discussed or shown in these presentations are not intended to mandate, direct, or control a State’s, local educational agency’s, or school’s specific instructional content, academic achievement system and assessments, curriculum, or program of instruction. States and local programs are free to use any instructional content, achievement system and assessments, curriculum, or program instruction that they wish, insofar as they support the goals and objectives of the 21st CCLC program, as authorized.

Published Materials

The contents of this webinar were developed, in part, under a contract from the Department of Education. However, those contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government.

How to Use the Technology



File Edit Share View Communicate Participant Event Help

Quick Start Event Info Family Involve...

04: How to Use the

Y4Y Web-based Training Online Professional Development

K O FOR YOUTH

21st Century Community Learning Centers
U.S. Department of Education
400 Maryland Avenue SW
Washington, DC 20202
y4y.ed.gov

Participants: 2

Jim Kiley-Zufelt (Host)

Panelists: 2

Jim Kiley-Zufelt (me)

Jim Kiley-Zufelt (Host)

Attendees: 0 (0 displayed)

Chat

from Jim Kiley-Zufelt to All Participants:
...and it will display up here!

Send to: All Participants

Type your question or comment down here...

Send

Full Screen 114% View

Cisco WebEx Event number: 669 671 597 Audio broadcast disconnected

Connected Cisco

Introductions

Welcome Remarks:

Dr. Sylvia Lyles

Director, AITQ
U.S. Department of Education
Office of Elementary and
Secondary Education

Host:

Jennifer Kobrin

Y4Y Content Specialist

Guest Presenter 1:

Kim Larson

Coordinator of Professional
Development
Nebraska 21st CCLC

Guest Presenter 2:

Kristie Maher

Executive Director
South Dakota Discovery
Center

Goals & Objectives

- Understand STEM and why it is an important priority for the US Department of Education and the 21st Century Community Learning Centers Program
- Learn how the Y4Y portal can enhance STEM topics in your afterschool program
- Hear from two states who are providing innovative STEM opportunities to 21st CCLC grantees

Poll



Seize the STEM Potential

Welcome Remarks:

Dr. Sylvia Lyles

Director, AITQ

U.S. Department of
Education

Office of Elementary and
Secondary Education



You for Youth
y4y.ed.gov/Default.aspx
Sign In / Join Us
Sitelide Keyword Search GO
HOME / COURSES / COACHING MODULES / EXCHANGE / DESIGN STUDIO / RESOURCES AND TECHNICAL ASSISTANCE

Y4Y FOR YOUTH

Welcome to You for Youth! I'm very happy to share this online community with you, our talented and hard-working 21st Century afterschool professionals. We've developed this entire website based on what you're telling us you need to create engaging afterschool programs. The site will help you connect and share resources with your colleagues, provide professional development and technical assistance opportunities, and offer tools for improving your program practices. Thank you for joining us!

Sylvia Lyles, Ph.D. INTERIM DIRECTOR, AITQ
U.S. DEPARTMENT OF EDUCATION
OFFICE OF ELEMENTARY AND SECONDARY EDUCATION

About 21st Century Community Learning Centers
Learn about the 21st Century Community Learning Centers program and You for Youth.

Introducing You for Youth
Watch this engaging short video to learn about the features of the You for Youth professional development Web portal and what it can do for you.

Y4Y Webquest
Try our 30-minute webquest at your next program staff meeting. It's a fun way to help 21st CCLC professionals envision ways to make the most of Y4Y!

THE DESIGN STUDIO
Introducing the Design Studio:
A collection of downloadable tools and resources to help you implement your Y4Y learnings in your program as well as tips and step-by-step guides on how to customize the tools to fit your needs.

The Exchange
Take part in webinars, join discussion boards with peers, set up a profile for your program that others can see and learn from. You can also share resources, photos, and videos from your program or find materials created by other 21st CCLC programs.

User Guide
New to Y4Y? This guide will help you navigate the site and use the online learning and networking features.

Resource Search
Find publications, lesson plans, tools and more here!

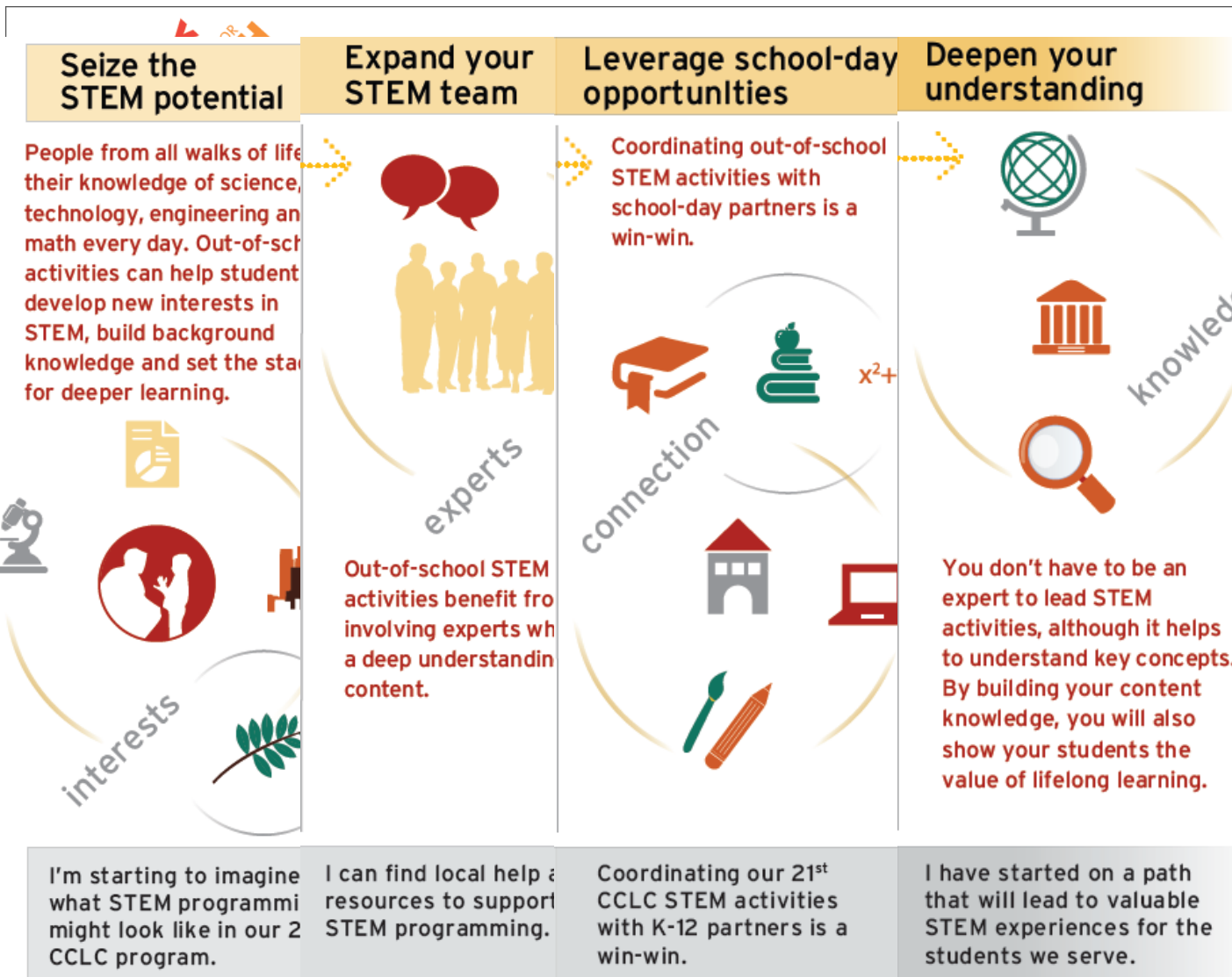
Tell Us What You Think!
What topics are most important to you? Where do you need help? What suggestions do you have for the site?

Featured on this site...
STEM
You and your students are already using science, technology, engineering and math (STEM) more than you may realize. And building on existing knowledge is easy when you make STEM real, active and local.
Watch the Trailer

Find Programs
Select a state or territory from the map to get contact information and a list of afterschool providers.

ED.gov | Site Disclaimer | Suggestion Box | Contact Us | Privacy Policy

STEM Diagram



Using the Language of STEM



Deepen Your Understanding


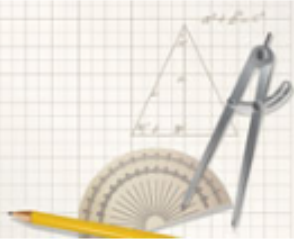
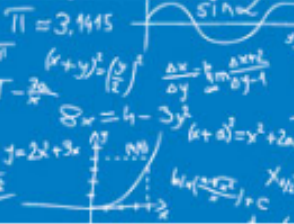
CLOSE

To encourage students to...	She might say...
 <p>Observe</p>	<ul style="list-style-type: none"> What do you notice? Describe what you're seeing. Tell me more about that.
 <p>Predict</p>	<ul style="list-style-type: none"> What do you think will happen next? What will happen if we change the (<i>size, shape, temperature...</i>)? Why do you think that will happen?
 <p>Model solutions</p>	<ul style="list-style-type: none"> Can you tell me more about what you're thinking? Can you draw a picture to show us how your idea would work?

Courses > STEM > Deepen Understanding

Using the Language of STEM: Your Turn

? Activity: Your Turn
Page 8 of 11
◀ Back
▶ Next

STEM Thinking Habit	Questions to Encourage Thinking
 <p>Troubleshooting (figuring out what to do when something doesn't work as expected)</p>	<div style="border: 1px solid #f96; height: 150px; width: 100%;"></div>
 <p>Estimating (distances, actual sizes of object based on scale drawings, etc.)</p>	<div style="border: 1px solid #f96; height: 150px; width: 100%;"></div>
 <p>Using the vocabulary of science and math in everyday conversations</p>	<div style="border: 1px solid #f96; height: 150px; width: 100%;"></div>

Create PDF

Courses > STEM > Deepen Understanding

STEM Resources on Y4Y



Enter Search Terms: STEM

Go

National Lab Network

The Network is a public-private partnership that is part of the White House Educate to Innovate Initiative. The network is designed to connect volunteers — including university students, scientists, engineers, other STEM professionals and interested community members — with educators (including out-of-school program staff) to bring engaging, hands-on STEM experiences to students in grades K-12. Using a project request form, educators can post requests for volunteer help, access to equipment, or expertise needed for specific projects. They can also search a database of available resources or view a geographic map of STEM projects under way across the country.

and aligned to educational resources throughout a community. While there is no complete model, efforts across the country point the way toward redesigning education. A review of research and emerging strategies suggests a new learning system that includes the following elements: redefinition of student success; use of knowledge about how students learn best throughout the day — and year round; integration of various approaches to acquiring and reinforcing knowledge; intentional collaboration across local, state and national sectors; and new leadership and professional development opportunities. C.S. Mott Foundation. (2007). Flint, MI: Author.

Resources and Technical Assistance
 > Resource Search > Search Term: “STEM”

Y4Y and STEM: The Exchange



★ Discussion Boards

What has your program done that worked well? What are you struggling with? Coach each other by entering discussions with peers. Post your challenges and successes in the discussion board and interact with other programs across the country that can share useful feedback or resources.

Topics

➔ Aligning With The School Day	Discussions (Active / Awaiting Approval / Total): 0 / 0 / 0
➔ Family Involvement	Discussions (Active / Awaiting Approval / Total): 1 / 0 / 1 Most recently updated on October 25, 2012
➔ Project-Based Learning	Discussions (Active / Awaiting Approval / Total): 2 / 0 / 2 Most recently updated on November 5, 2012
➔ STEM	Discussions (Active / Awaiting Approval / Total): 1 / 0 / 1 Most recently updated on November 5, 2012
➔ Strengthening Partnerships	Discussions (Active / Awaiting Approval / Total): 1 / 0 / 1 Most recently updated on November 6, 2012



Guest Presenter 1:

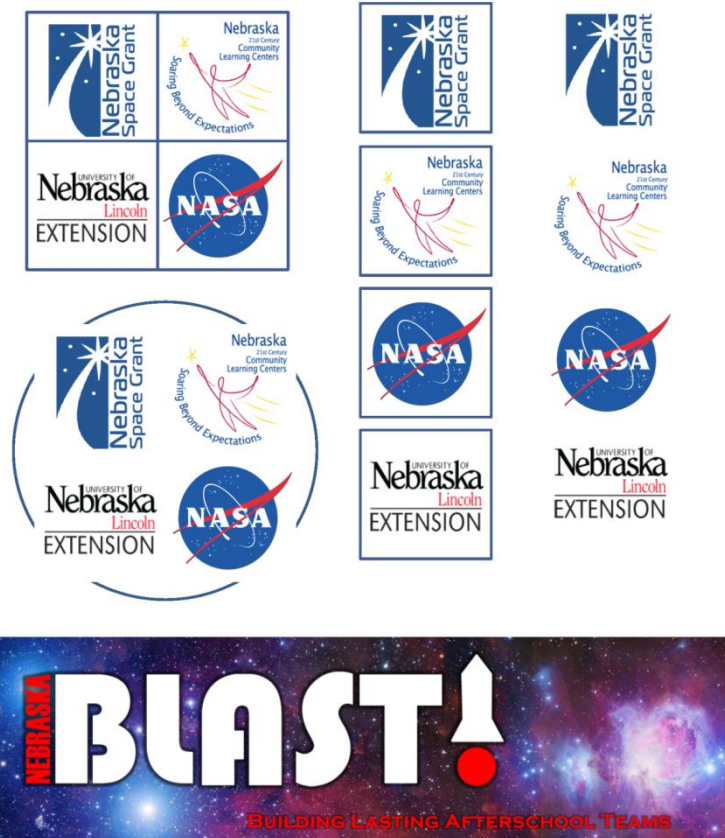
Kim Larson

Coordinator of Professional Development
Nebraska 21st CCLC

Nebraska BLAST!

Building **L**asting **A**fterschool
STEM **T**teams

Nebraska BLAST!



Nebraska BLAST! is funded by a **NASA Summer of Innovation Cooperative Agreement**, and through partnerships with:

- Nebraska 21st Century Community Learning Centers
- Nebraska Department of Education
- NASA Nebraska Space Grant
- University of Nebraska-Lincoln Extension
- University of Nebraska Munroe Meyer Institute
- University of Nebraska-Omaha
- Strategic Air and Space Museum, Ashland, NE

Nebraska BLAST!

- Curriculum and ongoing support provided by NASA and Nebraska STEM experts
- 1, 2 and 3-day regional workshops delivered, primarily in the summer
- Afterschool staff and teachers attend workshops as a team
- Provide curriculum, resources, and materials to support implementation
- Connect programs to STEM experts in their communities

Nebraska BLAST! Content Strands



- Robotics
- Cosmic Connections to the Universe
- Aviation and Aeronautics
- Rocketry
- High Altitude Ballooning



Robotics



YOU

Robotics

- NASA Resources
- Robotics Unplugged Camp Guide
- Robotics
- 4-H Robotics
- GEAR TECH 21

Aviation and Aeronautics



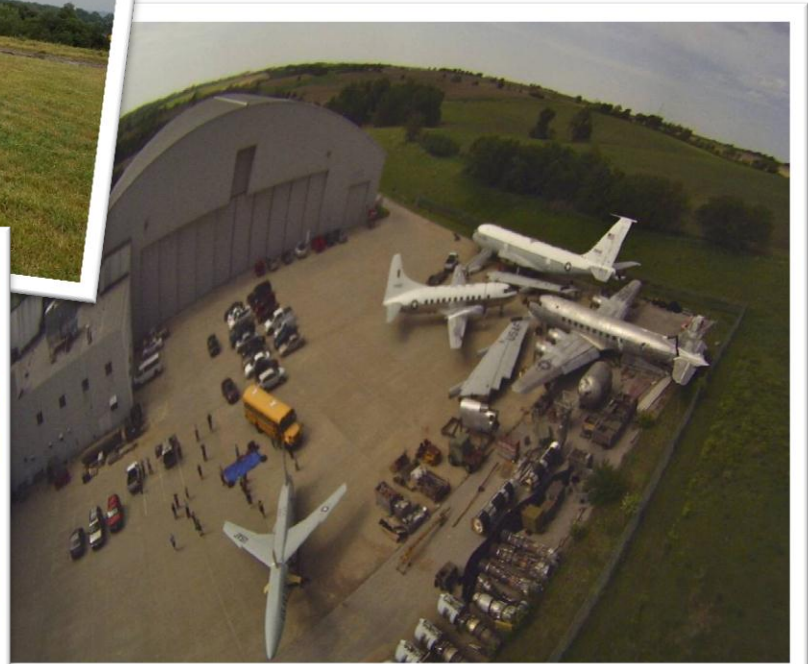
Aviation and Aeronautics

- NASA Resources
- Museum in a Box
- Aeronautics Resources for K-12 Educators
- Aeronautics Camp
- NASA Space Grant Offices
- Local and Regional Airports

Cosmic Connections to the Universe



High Altitude Ballooning Rocketry

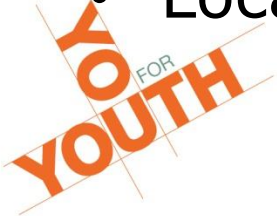


YOUTH

Cosmic Connections to the Universe: High Altitude Ballooning Rocketry



- NASA Resources
- Summer of Innovation Rocketry Camp Guide
- NASA Space Grant
- Science Museums (Example: Strategic Air and Space Museum near Omaha, Nebraska)
- Local Astronomy Clubs



Our Next Steps...

- Provide ongoing support for designing and implementing summer and school year STEM experiences in Nebraska 21st CCLC programs
- Provide project-based learning professional development to promote deeper understanding of STEM content (including literacy connections)
- Continue to build community and regional connections and support for STEM education

Where to Begin...

- Form partnerships with STEM experts: community, regional, and state
- Build collaborative working relationships between school day teachers and afterschool staff
- Take one step at a time: Start small and build your program

Guest Presenter 2:

Kristie Maher

Executive Director
South Dakota Discovery
Center

South Dakota STEM Showcase



Great Explorations in Math & Science (GEMS)

Partners:

- South Dakota Discovery Center
- South Dakota DOE 21ST Century Community Learning Centers



Partnership Inspired 21st CCLC STEM Activities

21st CCLC's bring students on field trips to the science center exhibit hall for free exploration



Field Trips to SD Discovery Center



Partnership Inspired 21st CCLC STEM Activities



Secret Formulas GEMS kit

Kids love 21st CCLC staff-led STEM activities from **GEMS kits**

"Simply put we use the GEMS kits because they save us time. We know all the projects meet state standards. Almost everything is there, so we use what we want for activities. "

*-Kristy Messner,
Belle Fourche JAM*

Partnership inspired 21st CCLC STEM Activities



Penguins and Their Young Kit

- 21CCLC's invite SD Discovery Center educators to conduct **outreach programs** at their sites
- For strongest impact, some sites host regularly scheduled programs

SD Discovery Center Outreach Programs

- 100% of responding sites that have hosted SDDC outreach agreed that their students' interest in science has increased due to the use of SDDC science programs and that students' science skills have improved
- 60% of participants agreed that staff members improved science teaching skill and/or confidence through exposure to SDDC outreach programs held at their sites



Science of Flight Outreach Program

Partnership Inspired 21st CCLC STEM Activities

- Students get a whole month to explore **hands-on science exhibits** at their 21st CCLC site
- Site staff use coordinating teaching kits for added learning and hands-on experiences



Traveling Exhibits



“The kids and staff in Huron love the traveling exhibits. We have had every one of them and have found that majority of them meet the needs of all grade levels- there is something for everyone. We would get more of them if we could. The students and staff appreciate the clear directions and teaching materials that are included with each exhibit.”

Laura Willemsson, Assistant Principal,
Huron, SD

Family Festivals To Go



Family Water Festival

- **Family Festivals To Go** are borrowed by 21st CCLC sites
- These festivals are designed to make it as easy as possible to host a fun, educational family event
- Kits are maintained by SD Discovery Center

Family Festivals To Go



Family "Build It" Festival

- Some 21st CCLC's have used the basic model to make family nights of their own
- Stanley County GOLD CLC has borrowed SDDC microscopes, GEMS kits, tobacco prevention materials, and lego kits to use during family nights
- Several other sites host family nights using the HOP exhibits

Thank You

Guest Presenter 1:

Kim Larson

Coordinator of Professional
Development
Nebraska 21st CCLC

Guest Presenter 2:

Kristie Maher

Executive Director
South Dakota Discovery
Center

Q & A



Today's Webinar

- Understand STEM and why it is an important priority for the US Department of Education and the 21st Century Community Learning Center Program
- Learn how the Y4Y portal can enhance STEM topics in your afterschool program
- Hear from two states who are providing innovative STEM opportunities to 21st CCLC grantees

Next Steps

Visit The Exchange on Y4Y to:

- Download today's PowerPoint presentation
- View a recording of today's webinar
- Access resources highlighted in today's webinar

Don't forget to register!

<http://y4y.ed.gov/SiteRegister.aspx>